USGS science for a changing world

Earthquake Shaking **Green Alert**

GSN USAID FROM THE AMERICAN PEOPLE ANSS

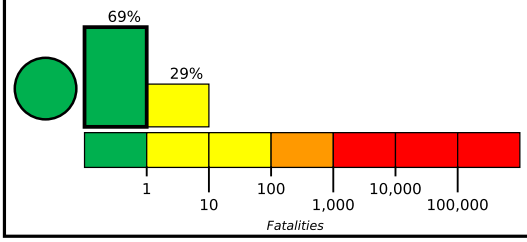
M 4.0, 7 km S of Williamsville, Missouri

Origin Time: 2021-11-18 02:53:03 UTC (Wed 20:53:03 local)
Location: 36.9077° N 90.5430° W Depth: 16.5 km

PAGER Version 8

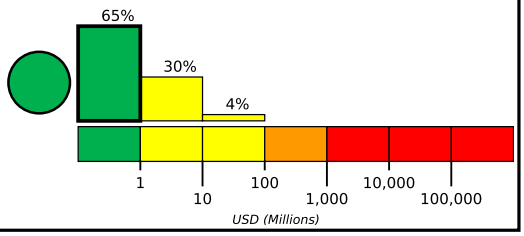
Created: 1 day, 1 hour after earthquake

Estimated Fatalities



Green alert for shaking-related fatalities and economic losses. There is a low likelihood of casualties and damage.

Estimated Economic Losses



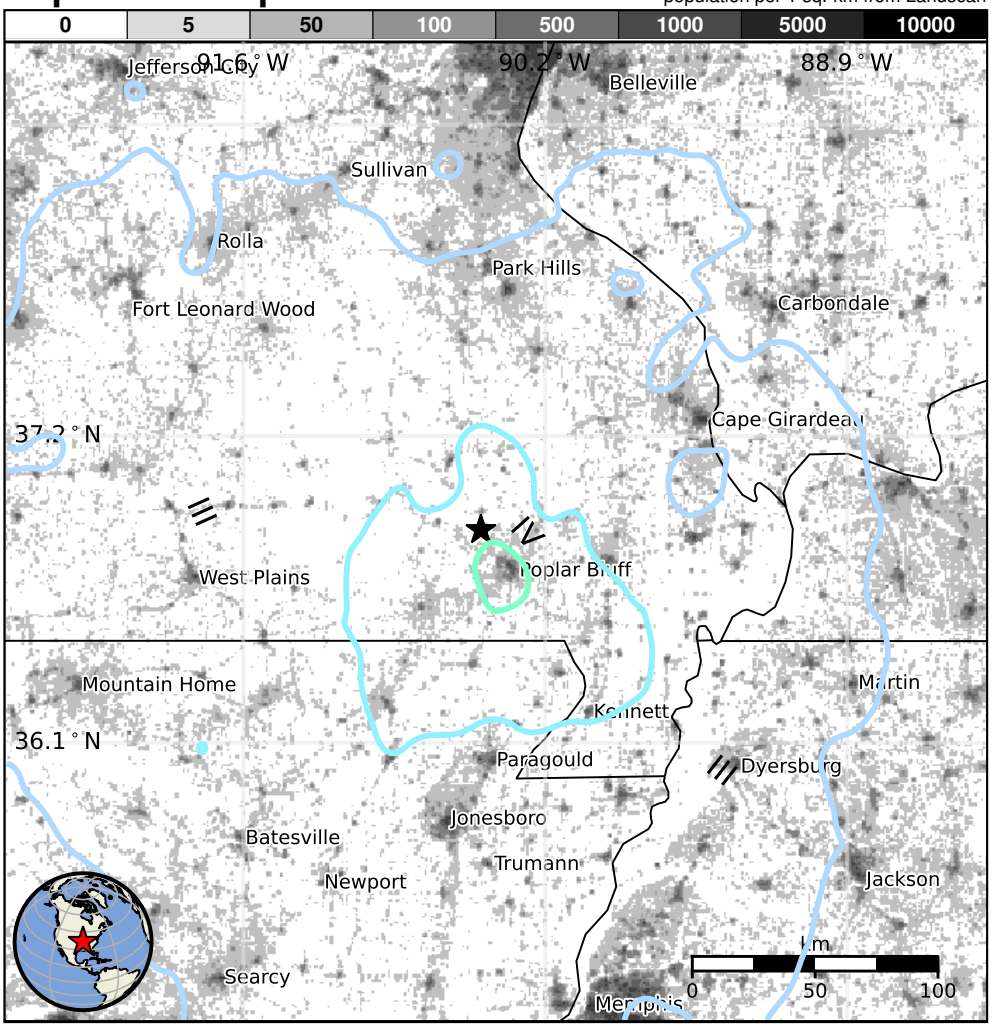
Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k=x1000)		–*	5,020k*	109k	37k	0	0	0	0	0
ESTIMATED MODIFIED MERCALLI INTENSITY		**I**	**II-III**	**IV**	**V**	**VI**	**VII**	**VIII**	**IX**	**X+**
PERCEIVED SHAKING		Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	**Resistant Structures**	None	None	None	V. Light	Light	Moderate	Mod./Heavy	Heavy	V. Heavy
	Vulnerable Structures	None	None	None	Light	Moderate	Mod./Heavy	Heavy	V. Heavy	V. Heavy

*Estimated exposure only includes population within the map area.

Population Exposure

population per 1 sq. km from Landscan



Structures

Overall, the population in this region resides in structures that are resistant to earthquake shaking, though vulnerable structures exist. The predominant vulnerable building types are unreinforced brick masonry and reinforced masonry construction.

Historical Earthquakes

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
1976-03-25	144	4.5	IV(32k)	–
1976-03-25	142	5.0	VI(59k)	–
1987-06-10	315	5.1	VI(1k)	0

Selected City Exposure

from GeoNames.org

MMI	City	Population
V	**Poplar Bluff**	**17k**
IV	Clarkton	1k
IV	Campbell	2k
IV	Gideon	1k
IV	Corning	3k
IV	Doniphan	2k
III	**Memphis**	**647k**
III	**Jonesboro**	**67k**
II	**Jefferson City**	**43k**
II	**Jackson**	**65k**
II	St. Louis	319k

bold cities appear on map. (k=x1000)

PAGER content is automatically generated, and only considers losses due to structural damage. Limitations of input data, shaking estimates, and loss models may add uncertainty.

https://earthquake.usgs.gov/earthquakes/eventpage/nm60363582#pager

Event ID: nm60363582